

# THE NATION

## AND ATHENÆUM

### NAVAL CONFERENCE SUPPLEMENT

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#### FOREWORD

THE object of this Supplement is to present briefly, and in a form convenient for reference, such information as may assist our readers in following the course of the Five-Power Conference. In order to understand the significance of the Conference, it is necessary to take account of the present position and tendencies in warship construction. To understand the attitude and arguments of the Powers taking part in it, it is necessary to know something of their naval policy, and their attitude at previous conferences. The proposals actually put forward at the Conference will inevitably be compared with the existing Fleets of the Powers, and with the claims they have put forward in the past. In supplying the material for these comparisons, we have kept rigidly to statements of fact. All comment is reserved for our weekly columns. This Supplement is intended only to supply an accurate record of the data which all comment will have to take into account.

#### STAGES IN THE NAVAL LIMITATION PROBLEM

##### BRITISH NAVAL POLICY BEFORE THE WAR

Down to about 1905, British naval construction was governed by a Two-Power standard. The strength maintained in Battleships was roughly equal to the combined forces of France and Russia; but, owing to the volume of trade and length of trade routes to be protected, British cruiser strength was maintained at a considerably higher level. In 1900, Great Britain had 141 Cruisers built and building; France, 52, and Russia, 23. After the emergence of Germany as a great Naval Power, and the conclusion of the Entente with France, the guiding principle was to keep a substantial margin of superiority over Germany in Capital Ships; but, as shown by Table 1, the predominance of the British Empire in cruiser strength was still very marked. The only attempt made during this period to limit naval armaments was the abortive policy for a "naval holiday," or period of suspended building, made to Germany by Mr. Asquith's Government.

##### SITUATION AFTER THE WAR

The effect of the war was to eliminate the German fleet and practically to eliminate the Russian. British cruiser strength in 1919, as shown in Table 2, was, numerically, a little below the level of 1914, but the number of British cruisers, built and building, was greater than that possessed by the other four leading Naval Powers together.

The United States had now replaced Germany as the second Naval Power. She was weak in modern cruisers, but had laid down a very large number of destroyers in response to British requests for assistance against the submarine attack. In 1916, she embarked on a formidable programme of Capital Ship construction which, if completed, would have brought her within measurable distance of the British strength, having regard to the large proportion of American ships of post-Jutland design. There was thus a serious

danger of a "naval race" between the United States and Great Britain, but this was overshadowed, during the next few years, by the growing tension between the United States and Japan, arising out of disputes over the American immigration laws and Japanese policy in China. Japan was now the third Naval Power, and a law of 1918 had authorized large additions to her fleet. Naval competition between the United States and Japan showed signs of becoming acute when, in 1921, President Harding called together the Five-Power Washington Conference, for the purpose of considering the double problem of Pacific policy and naval limitation.

##### THE TREATY OF WASHINGTON, 1922

In its political aspect, the Washington Conference was very successful, thanks largely to the conciliatory attitude of Japan. On the naval side, competition in Capital Ships was eliminated by Great Britain's acceptance of Anglo-American parity in that class, and the acceptance of a 60 per cent. ratio by Japan. Japan originally asked for 80 per cent., but reduced her demand, on the United States agreeing to preserve the *status quo* as regards naval bases and fortifications in the Western Pacific. France (very unwillingly) and Italy accepted a 33 per cent. ratio. The United States also proposed to limit Cruiser and Destroyer tonnage and Submarine tonnage to 450,000 tons and 90,000 tons respectively for the two leading Powers; 270,000 tons and 54,000 tons for Japan. Great Britain, however, was not yet prepared to accept the principle of parity in the lighter types, nor were the other Powers ready to extend the ratio of 5: 5: 3: 1½: 1½ to these classes. All that could be done was to set bounds to competition in Cruiser construction, by limiting the maximum tonnage and armament of the individual unit. A British proposal to abolish submarines altogether was defeated by the opposition of France and Japan; but all five Powers set their hands to a treaty declaring it illegal for submarines or other warships to attack any merchant vessel unless it resisted visit and search, or to destroy the ship, in any event, without providing for the safety of the crew.

The chief provisions of the principal Naval Treaty were as follows:—

**Capital Ships.**—Standard tonnage fixed at: British Empire and United States, 525,000; Japan, 315,000; France and Italy, 175,000 tons.

Great Britain, the United States, and Japan, who were well above standard strength, to scrap ships built and building as shown in Table 3 below. Great Britain to be allowed to lay down two ships of post-Jutland design. Subsequently, all five Powers to scrap and be permitted to replace ships at dates set out in the Schedule to the Treaty, so as to attain standard tonnage in 1942. New ships not to exceed 35,000 tons, or carry guns exceeding 16-in. in calibre, and not to be replaced until the expiration of twenty years from date of completion.

**Aircraft Carriers.**—Standard tonnage to be 135,000 tons for British Empire and United States; 81,000 tons for Japan; and 60,000 tons for France and Italy. No Aircraft Carrier to carry guns above 8 in., or to exceed 27,000 tons, with certain

exceptions for scrapped Capital Ships converted into Carriers. Minimum life to be twenty years.

*Other Ships.*—No other warship to be laid down, exceeding 10,000 tons, or carrying guns exceeding 8-in. calibre.

*Merchant Cruisers.*—No preparation to be made in time of peace for converting merchant vessels into warships in time of war, other than stiffening decks to receive mountings of guns not exceeding 6-in. calibre.

*Bases.*—The *status quo* to be maintained as regards fortifications and naval bases in the Western Pacific, within defined limits.

*Duration of Treaty.*—Treaty to remain in force until December 31st, 1936, and if not denounced two years before that date, to continue in force, subject to two years' notice by any signatory Power.

The effect of the Treaty on Capital Ship Fleets is shown in Table 3. It involved heavy sacrifices, by Great Britain of actual, and by the United States of future and potential, strength, and effected large economies in construction and upkeep for the three Powers who scrapped ships.

#### AFTER WASHINGTON—THE 10,000-TON CRUISER

The limits of 10,000 tons and 8-in. guns fixed for cruisers by the Washington Treaty had often been exceeded before the war. In 1914 the cruiser fleets included vessels ranging up to 14,000 tons, with guns ranging up to 12-in. calibre. By 1922 most of these ships had become obsolete or obsolescent, and the war programmes had mainly been restricted to light cruisers of under 6,000 tons, with guns not exceeding 6-in. in calibre. The chief exceptions were the British "Vindictives" (laid down 1916-17), of nearly 10,000 tons, with 7.5-in. guns.

In 1923, the Japanese laid down the first of the "Furutaka" type, of 7,100 tons only, but armed with 8-in. guns. Great Britain had hitherto laid down no vessels since 1918, to replace the rapid wastage of her cruiser fleet by obsolescence; but in 1924 she laid down five ships of the Washington maximum—10,000 tons and 8-in. guns. France and Japan also began the construction of 10,000-ton, 8-in. gun cruisers in 1924; and in December of that year the United States Congress passed an Act authorizing the construction of eight such ships. In 1925 Great Britain embarked on a replacement programme (subsequently modified), involving the laying-down of nine more ships of 10,000 tons, and seven of 8,400 tons—all armed with 8-in. guns—within five years; two 10,000-ton ships were also laid down for the Australian Navy. In 1925 also, Italy laid down her first of the type. There seemed to be a danger that the elimination of competition in Capital Ships would be followed by a new "naval race" in cruisers, and this danger was intensified by the violent agitation of the "Big Navy Group" in the United States in favour of building up to parity with Great Britain in the classes not limited at Washington, and possibly, by the construction of the new British base at Singapore.

#### THE ROME CONFERENCE, 1924

This Conference was called, on the initiative of the League of Nations, to apply the methods of the Washington Treaty to the fleets of the Minor Naval Powers; but the Conference broke up without agreement.

#### PREPARATORY COMMISSION FOR DISARMAMENT: SUB-COMMISSION'S REPORT, 1926

During the year 1926, the whole problem of disarmament was under discussion by the experts who formed Sub-Commission "A" of the Preparatory Commission. The result, so far as naval armaments were concerned, was to show two main points of dispute between the Oceanic Powers (Britain, the United States, and Japan) and the Continental Powers (headed by France and Italy). The former desired naval disarmament to be separately considered, and insisted on limitation of total tonnage and size of units in each category of warships. The latter desired land, sea, and air armaments to be jointly considered, and proposed that fleets should be limited by "global" tonnage, leaving each Power free to allocate its total quota among the various categories, at its own discretion.

#### THREE-POWER CONFERENCE AT GENEVA, 1927

In these circumstances, President Coolidge, alarmed at the prospects of a new "naval race," issued invitations for a Conference to the five Washington Powers. France declined the invitation, on the ground that she did not wish to discuss naval armaments separately, or in advance of the League. Italy also refused. Japan and the British Empire accepted. It is unnecessary to go fully, here, into the story of the breakdown of the Conference; but the actual proposals made by the three Powers are of importance, for comparison.

*Original British Proposals.*—The Washington ratio of 5:5:3 to be applied to 10,000-ton Cruisers with 8-in. guns; the number to be settled by discussion; the minimum life for replacement purposes to be twenty-four years. No limitation on total tonnage of Light Cruisers, Destroyers, and Submarines, until agreement could be reached with France and Italy. Quotas to be based on special strategical needs of each Power. Minimum requirements of British Empire stated at seventy Cruisers of all classes.

The size of *Capital Ships* to be reduced to 30,000 tons and maximum calibre of guns to 13.5 in.; the minimum life to be raised to twenty-six years. Size of *Aircraft Carriers* to be reduced to 25,000 tons, and guns to 6 in.

*Light Cruisers* to be restricted to 7,500 tons, with 6-in. guns.

All other types to be restricted to 5-in. guns. Maximum size of *Flotilla Leaders* and *Destroyers* to be 1,750 tons and 1,400 tons respectively, with a life of twenty years. *Ocean-going* and *Coastal Submarines* to be limited to 1,600 tons and 600 tons respectively, with a life of sixteen years.

*Original American Proposals.*—The 5:5:3 ratio to be applied to all classes, with limitations on total tonnage as follows:—

	British Empire & U.S.A.	Japan.
Cruisers	250,000 to 300,000	150,000 to 180,000
Destroyers	200,000 to 250,000	120,000 to 150,000
Submarines	60,000 to 90,000	36,000 to 54,000

No separate limit on 10,000-ton Cruisers.

*Original Japanese Proposal.*—To stereotype the existing strength of each Power, in ships built, building, and authorized.

*Subsequent Proposals.*—The British pressed for separate limitation of 10,000-ton Cruisers. The Americans offered to increase the total cruiser tonnage to 400,000 tons, on condition that the United States should be allowed twenty-five Cruisers of 10,000 tons with 8-in. guns. The British wished to reduce this to fifteen. Japan asked for an increased ratio in big cruisers, but eventually agreed to accept 66 per cent. Finally, an Anglo-Japanese compromise was put forward, on the following lines:—

	British Empire & U.S.A.	Japan.
Cruisers with 8-in. guns	150,000 tons	100,000 tons
Light Cruisers and Destroyers	350,000 tons	225,000 tons
Submarines	90,000 tons	60,000 tons

Light Cruisers to be limited to 6,000 tons with 6-in. guns. Each Power to retain, for subsidiary purposes, 25 per cent. of its quota of Cruisers and Destroyers, after they had reached the age for replacement. Such ships to be additional to the quota.

It appears, from Lord Cecil's statement, that a compromise might have been agreed, provided the Americans were allowed to raise the size and armament of their lighter Cruisers to 8,000 tons and 8-in. guns. The Conference eventually broke down on the British Cabinet's refusal to give way on the 8-in. gun question.

On the failure of the Conference, the United States proceeded to complete the 1924 Cruiser programme, which had been held up by President Coolidge, and in 1928 a Bill was introduced in Congress, providing for fifteen Cruisers of the largest type to be laid down during the next three financial years, as well as a large number of other vessels.

#### PREPARATORY COMMISSION AND PROPOSED ANGLO-FRENCH COMPROMISE, 1928

The discussions of the Preparatory Commission disclosed the same differences of opinion as the Report of Sub-Commission "A," and the French and British Governments



eventually agreed to discuss the means by which these conflicting points of view could be reconciled. As regards naval armaments, the suggested compromise was as follows:—

"Surface vessels of or below 10,000 tons, armed with guns of more than 6-in. and up to 8-in. calibre," and submarines exceeding 600 tons to be limited. All Powers to be formally entitled to parity in these classes; but each Power to undertake only to build up to a separately agreed, specified figure during the life of the Convention. No limitation to be placed on the construction of Cruisers of any size with guns of 6-in. or lesser calibre, Destroyers, or Submarines of or below 600 tons.

The United States Government thereupon issued a Note, firmly refusing to consider any scheme which did not embrace all categories of warships; but suggesting that the special needs of particular Powers might be met by allowing them to utilize an agreed percentage of their quota in any one category for the construction of ships of another category (e.g., to substitute Cruisers for Submarines or *vice versa*).

Italy, in a Note of October 6th, 1928, advocated limitation by "global tonnage," rather than by categories, and expressed a willingness to accept any limit, however low, "provided it is not exceeded by any other Power on the Continent of Europe."

#### PREPARATORY COMMISSION—MR. GIBSON'S STATEMENT, 1929

Early in 1929 the United States Congress passed the Fifteen Cruiser Bill, cutting out, however, the bulk of the proposals for construction of other vessels, and ratified the Kellogg Pact. When the Preparatory Commission resumed its sittings, Mr. Gibson, the chief American representative, stated that President Hoover regarded the Pact as the dominant factor in disarmament discussions, and that, while the United States adhered to the principle of "relative needs," and limitation by categories, they were willing to discuss any methods of meeting the special needs of other Powers, either by transference of tonnage, or by a more elastic formula for estimating the relative value of naval units.

#### ANGLO-AMERICAN CONVERSATIONS, 1929

No full, authoritative account of these conversations has been published, but the following points are believed to have been provisionally agreed:—

Parity between the United States and the British Empire, in all categories of warships to be attained by 1936. Parity in Cruiser strength to take account of factors other than total tonnage.

The British Empire to accept a total *Cruiser tonnage* of about 340,000 tons; comprising fifteen ships armed with 8-in. guns (thirteen of 10,000 and two of 8,400 tons), and thirty-five Light Cruisers, with 6-in. guns, averaging about 5,500 tons.

The United States to accept a total *Cruiser tonnage* variously stated between 290,000 and 315,000 tons; to comprise at least eighteen Cruisers of 10,000 tons with 8-in. guns. It is understood that the Americans claimed twenty-one such Cruisers, and that the actual number was left to be settled at the forthcoming Conference. Other ships to carry 6-in. guns, and be restricted to about 7,000 tons.

*Destroyer tonnage* to be fixed at the Conference. A figure between 125,000 tons and 150,000 tons is said to have been discussed.

The life of *Capital Ships* under the Washington Treaty to be prolonged, thus postponing replacement. (According to the Treaty, British, American, and Japanese replacements would begin in 1931. France and Italy were authorized to begin replacements in 1927, but have not done so.) It is also reported that it is proposed to reduce the total quotas, by a decrease in the maximum tonnage of new units, and possibly by non-replacement of some existing units.

*Submarine fleets*, failing agreement on total abolition, to be reduced by non-replacement of obsolescent craft.

#### THE FIVE-POWER CONFERENCE:

##### TERMS OF INVITATION AND ACCEPTANCE

The British Note of Invitation to the Conference set out as the four principal points on which an Anglo-American agreement had been arrived at:—

- (1) and (2) The negotiations to be considered as a "direct continuation" of the Peace Pact, and to be based on Anglo-American parity.
- (3) Revision of the life of Capital Ships, "so as to avoid the carrying out of the full programme of replacement" contemplated at Washington.
- (4) The desire of the British Empire and the United States to abolish submarines—with the proviso that "this measure cannot be carried out without the consent of all the Powers concerned."

The invitation also stated that it was not proposed "to set up new machinery for dealing with the naval disarmament question; on the contrary, it is hoped that by this means a text can be elaborated which will facilitate the task of the League of Nations Preparatory Commission and of the subsequent General Disarmament Conference."

The Japanese Reply was an unreserved acceptance, and emphasized Japan's desire for actual reduction, as well as limitation of Navies.

The French Reply contained no formal reservations, but referred to "the principles which have never ceased to guide French policy," as laid down at Geneva and elsewhere. It laid special stress on the relation between the Conference and the Preparatory Commission. A Memorandum subsequently issued by the French Government further emphasized this point, and emphasized the dependence of disarmament on material guarantees of security, such as the League sanctions.

The Italian Reply followed the same lines, but referred specifically to the Note of October 6th, 1928, outlined above.

#### THE NAVAL POLICIES OF THE POWERS

Subject to financial considerations, the building programmes of all Powers are governed by the requirements of strategical schemes, recorded in war books and war orders which are among the most secret documents in a Government's possession. No outsider can hope to gauge accurately the aims of the respective Admiralties. It is possible, however, to deduce from the public utterances of sailors and statesmen, from the course of previous disarmament negotiations, from the trend of Press and Parliamentary discussion, and from the reports of manoeuvres, some broad, general conclusions as to the main lines of naval policy and the most pressing preoccupations of the Naval Staffs.

##### THE BRITISH EMPIRE:

The chief anxieties of the British Admiralty were very frankly stated by Lord Jellicoe at Geneva in 1927. They arise from the great length of Empire communications, and from the necessity of protecting an enormous volume of sea-borne trade, on which Great Britain depends for two-thirds of her food supplies and the bulk of her essential raw materials; the great bulk of which passes through a strategic area of enormous importance in the Western approaches. It was the British case, as then put forward, that the forces required for defence of this trade are only in part relative to the precise strength of the attack. A fixed number of cruisers and destroyers are required for screening and scouting duty with the battle-fleet—on which the whole scheme of protection ultimately rests. Any attack sufficiently serious to involve, let us say, the running of trade in convoy, or the patrolling of a certain number of focal points and approach areas, will entail the allocation of a fixed number of vessels to direct trade defence. For this reason, it was said, there was a certain minimum numerical strength below which the cruiser strength (and the same argument applies to destroyers) could not be allowed to sink while war at sea remains a possible contingency. The First Lord's recent statement suggests that the British case will still be argued on the same lines, but with a big reduction in the number of cruisers claimed, owing to the diminution of risks by the Kellogg Pact.

##### THE UNITED STATES:

American public opinion is not highly instructed on naval affairs, and the demand for "parity"—as a political thesis—has undoubtedly been based largely on considera-

tions of prestige, reinforced by resentment at interference with American trade during the Great War, and a feeling that the United States must be strong enough at sea to assert its own views as to neutral rights. The fleet manœuvres, which are very fully reported, suggest that the chief technical preoccupations of the Navy Board are the security of the Panama Canal, and the maintenance of communications with outlying bases in the Pacific and Caribbean; but recent evidence, such as the examination of Admiral Hughes before a Committee of Congress, during the debates on the Fifteen Cruiser Bill, shows a growing recognition of the fact that the United States is becoming increasingly dependent on imports for the full efficiency of her industries. There are three other special points that must be kept in mind, in order to understand the American attitude in limitation discussions. First, the American Fleet is, at present, very weak in up-to-date cruisers, the energies of the American shipyards, between 1914 and 1924, having been devoted mainly to Capital Ship and Destroyer construction. The United States is thus interested in attaining formal cruiser parity at a low figure, in order to minimize the expenditure required in order to attain actual parity. Secondly, her demand for a large proportion of big cruisers is supported by the argument that her lack of oversea bases necessitates the provision of vessels with great radius of action. Finally, the American insistence on the 8-in. gun is based on the supposition (denied by all British naval authorities) that converted liners can stand up to a cruiser armed with 6-in. guns, and that the relative strength in mercantile tonnage must, therefore, be taken into account.

#### JAPAN:

Both the Press and the authorities in Japan are extremely reticent about anything which could throw light on the preoccupations of the Naval Staff. Japanese public opinion, however, is traditionally nervous of any foreign incursion into the China and Japan Seas. This anxiety has been reinforced by Japan's economic dependence on sources in this area for iron ore and other essential supplies. Articles by Commander Sato and others suggest that the defence of the China Seas and the oil-route to Borneo is the main object of Japanese naval policy, and this is confirmed both by the types of ships constructed and by what is known of the Japanese manœuvres. Japan's main anxieties were largely allayed by the self-denying ordinance of 1922 with regard to Pacific bases; but she is now contending that the great range of the 10,000-ton cruiser gives her a claim to at least a 70 per cent. ratio in that class.

#### FRANCE:

French naval policy is discussed with unusual freedom, and is based primarily on maintaining communications with French North Africa and Dakar, mainly for military reasons. French public opinion is also exercised about the immunity of the long coast line from raid or insult, and places great faith in the submarine as a defensive weapon. Within recent years anxiety as to the safety of the ocean trade routes has played a larger part in naval discussions. France has always stood out for the interdependence of land, sea, and air disarmament, and for naval limitation by total tonnage, with a free hand as to its allocation. Although she shows little interest in the construction of Capital Ships, she has always resented the low ratio allotted to her at Washington, which was only accepted because financial stringency rendered it obviously impossible to build to a higher figure.

#### ITALY:

Although Italy has a large mercantile marine, and is dependent, to a high degree, on oversea supplies, Italian discussion of naval affairs takes, generally speaking, singularly little account of definite strategic requirements. Technical and popular discussion are both mainly concerned with a comparison of strength between the French and Italian Fleets, and parity with France is put forward as the only acceptable criterion of limitation. This claim is

strongly contested by the French on strategic grounds, arising from the French requirements for defence of three separate coastlines and lengthy colonial communications.

### BUILDING PROGRAMMES AND THE CONFERENCE

It is extremely difficult to form any idea of what the building programmes of the Powers are likely to be in the event of the Conference breaking down, for naval construction in most countries, since the war, has been too spasmodic and irregular to suggest any settled line of policy. An analysis of the ships completed during recent years shows that neither Great Britain, nor the United States, nor France, nor Italy, has been replacing obsolescent vessels at the rate which will be necessary, in default of agreement, to maintain the fleets at their existing level. Japan alone has pretty steadily made good the wastage arising from obsolescence. The rate of completion, however, has been affected by the comparative stagnation of the shipyards between 1919 and 1924. When we turn to the *keels laid down* in recent years, we find that the rate of replacement is being accelerated. In cruisers, particularly, most Powers are now maintaining, or more than maintaining, their position. It is true that the acceleration is partly accounted for by the necessity of overtaking—especially in the British and American fleets, a long period of suspended activity. It is none the less a significant fact.

Moreover, while the Washington Treaty set definite limits to the competition in cruiser types, there is a general tendency to replace light cruisers of 4,000 or 5,000 tons by ships of the Washington maximum—10,000 tons, and the desire for greater radius of action has led to a great increase in the size of submarines. Excluding a few freaks, the submarines of the war programmes ranged around 700-800 standard tons. All Powers are now building submarines ranging between 1,000 and 2,000 tons. Destroyers show, at present, no general tendency to increase in size; but the latest French Flotilla Leaders show a very marked advance.

Any attempt to reduce these indications to precise figures, and to assess, in terms of tonnage, the price of non-agreement, would be totally misleading. Naval construction in the United States and Great Britain has been profoundly influenced during recent years by the course of the limitation discussions. The Statut Naval of 1924, which regulates French construction, was passed at a time when France could spare little money for her fleet, and an increase in the programme is already being advocated. A breakdown of the Conference would, in itself, tend to stimulate naval competition, and it must be remembered that, in default of agreement, any one Power will be able, to a great extent, to set the pace for all.

Over the heads of the British, American, and Japanese Admiralties hangs the Washington Schedule of Capital Ship replacement. For all three countries the programme, according to the Treaty, begins in 1931, and at present cost of construction (see Table 5), the cost to Great Britain of attaining standard tonnage by 1942 would be about £105,000,000. The cost of the ten ships scheduled to be laid down by the end of 1936 would be about £70,000,000.

It is from the reduction or postponement of Capital Ship replacement, and the avoidance of a prospective competition in the lighter types, that the chief financial benefits of agreement must be sought; but an acceptance of the figures said to have been discussed in the Anglo-American conversations would imply for Great Britain appreciable economies during the next few years in the scrapping, non-completion or non-replacement of cruiser and destroyer tonnage. The United States would remain committed to a large programme of cruiser construction, but would scrap a great number of destroyers.

	Br. Emp.	U.S.A.
Cruisers blt. & bldg. not over 20 yrs.	395,911	250,500
Proposed quota	340,000	290,000 to 315,000
Destroyers blt. & bldg. not over 16 yrs.	196,761	291,121
Proposed quota	125,000 to 150,000	125,000 to 150,000

The financial result of agreement for Japan would depend upon whether the 70 per cent. ratio was conceded, and how it was interpreted. Its adoption would seem to involve, in any event, some addition to her strength in 8-in. gun cruisers, and some small scrapping of destroyers. France and Italy, so far as is known, have put forward no definite tonnage proposals. It is noteworthy, however, that on the eve of the Conference the necessity for increasing the French building programme was being discussed in the Chamber and the Senate, and that parity with France would entail increased expenditure by Italy.

Finally, it must be emphasized that the actual effect of agreement on naval expenditure during the next few years depends very much on the life assigned to the various types. This point is of special importance because expenditure which can be postponed for a few years may ultimately be avoided altogether, by further progress in armament limitation.

NOTE ON GERMAN AND RUSSIAN FLEETS

The tables have been confined to the Fleets of the Powers taking part in the Conference; but brief particulars of the German and Russian Fleets may be useful for reference.

The German Fleet is limited by the Treaty of Versailles, and comprised on December 1st, 1929: 7 obsolete Battleships, 7 Light Cruisers (4 obsolescent), and 13 Destroyers. One Battleship and 2 Light Cruisers were building. The new Battleship, although restricted by the Treaty to 10,000 tons, carries 6 guns of 11-in. calibre and has a designed speed of 26 knots. The appearance of this new type has caused some alarm in France.

The Soviet Union possessed, on December 1st, 1929: 4 Capital Ships, 4 Cruisers, 32 Destroyers, and 15 Submarines, of which 2 Cruisers, 14 Destroyers, and 10 Submarines were obsolescent. One old-type Battleship and 2 Cruisers were building, but work on them was proceeding very slowly. In addition, there were at Bizerta, 1 Capital Ship, 2 Cruisers, 9 Destroyers, and 4 Submarines, negotiations for the return of which to the Soviet Government have not yet been completed. They are mostly old, in bad condition, and of little or no fighting value.

EXPLANATORY NOTE TO TABLES

Tables 1, 2, and 5 are based on figures in Brassey's "Naval and Shipping Annual."

Table 4, showing the naval strength of the Conference Powers, as on December 1st, 1929, is based on the Admiralty Return of Fleets (Cmd. 3464), the totals being calculated from the tonnage of individual ships as there given.

All displacements are in English tons. The tonnage of Capital Ships is that accepted at Washington in 1922. Cruiser and Destroyer tonnage is standard tonnage under the Washington Treaty (excluding fuel and reserve feed water). Submarine tonnage follows the Geneva formula (excluding fuel, fresh and ballast water, and lubricating oil).

Following the Admiralty Return:—

Built means vessels which were actually completed on December 1st, 1929. Building means vessels actually laid down, or for which money was voted in the current estimates. Projected means vessels the construction of which was authorized, but for which no money had yet been voted.

Obsolescent Ships.—Replacement of Capital Ships and Aircraft Carriers is regulated by the Washington Treaty. The Admiralty Return assumes an active life of 20 years for Cruisers, 16 years for Destroyers, and 12 years for Submarines, reckoned from date of completion. Vessels over that age on December 1st, 1929, are italicized in the Return, and are treated as "Obsolescent" in this table. It must not be assumed that all such ships are without fighting value, but the majority of them are definitely out of date, and will probably be scrapped when the vessels now building are completed.

Owing to the fact that the term "Building" includes vessels appropriated for but not yet laid down, and the frequent uncertainty with regard to dates of completion of other ships, it is impossible to give accurate figures showing the composition of Fleets at a future date. In this table the method of comparison adopted is to deduct Obsolescent ships from those Built (giving the actual effective total) and add all ships "Building," on the Admiralty definition. The final total gives a reasonably fair criterion of the standard at which the various Powers are aiming, although some additional ships will, no doubt, have become obsolescent before all those here classed as "Building" are completed.

(1) LEADING FLEETS IN 1914.

SHIPS BUILT AND BUILDING.

	Br. Emp.	France.	Russia.	Italy.	Germany.	Austria.	U.S.A.	Japan.
Modern Capital Ships .. ..	44	18	13	7	28	4	14	9
Older Battleships .. ..	38	13	6	8	20	9	22	11
Cruisers :								
First-Class .. ..	38	18	6	9	9	1	15	13
Light .. ..	89	12	16	11	45	9	10	16
Total Cruisers .. ..	127	30	22	20	54	10	25	29
Destroyers .. ..	244	87	141	46	152	19	60	59
Submarines .. ..	98	93	43	20	39	14	50	15

(2) LEADING FLEETS IN 1919.

SHIPS BUILT AND BUILDING.

	Br. Empire.	U.S.A.	Japan.	France.	Italy.
Modern Capital Ships .. ..	45	29	13	17	10
Older Battleships .. ..	6	13	6	5	4
Cruisers :					
First-Class .. ..	19	12	12	15	5
Light .. ..	90	13	8	3	6
Total Cruisers .. ..	109	25	20	18	11
Destroyers .. ..	ca. 390	326	?	96	58
Submarines .. ..	?	122	?	?	81



## (3) EFFECT OF THE WASHINGTON TREATY ON CAPITAL SHIP FLEETS.

A—SHIPS OF DREADNOUGHT DESIGN (ALL BIG GUNS 12" OR OVER).

B—OTHER CAPITAL SHIPS. C—TOTAL.

	British Empire.			U.S.A.			Japan.		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
Built .. .. .	42	2	44	22	15	37	11	11	22
Building .. .. .	4	—	4	13	—	13	6	—	6
Projected .. .. .	—	—	—	—	—	—	8	—	8
Total .. .. .	46	2	48	35	15	50	25	11	36
Ships Scrapped :									
Built .. .. .	24	2	26	4	15	19	1	11	12
Building .. .. .	4	—	4	13	—	13	6	—	6
Projected .. .. .	—	—	—	—	—	—	8	—	8
Total Scrapped .. .. .	28	2	30	17	15	32	15	11	26
Retained .. .. .	18	—	18	18	—	18	10	—	10
To be Built .. .. .	2	—	2	—	—	—	—	—	—

## (4) FLEETS OF THE CONFERENCE POWERS AS ON DECEMBER 1, 1929.

(A) CAPITAL SHIPS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Quota .. .. .		525,000		525,000		315,000		175,000		175,000
Built .. .. .	20	556,350	18	525,850	10	301,320	9	194,544	4	88,970

Building and Projected—Nil. The ships built are those retained under the provisions of the Washington Treaty. By the Treaty, 10 British, 10 American, 6 Japanese, 5 French, and 5 Italian ships of 35,000 tons each, or their equivalent, may be laid down before the end of 1936, and the whole existing fleets are replaceable by 1942.

(B) AIRCRAFT CARRIERS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Quota .. .. .		135,000		135,000		81,000		60,000		60,000
Built .. .. .	8	127,250	3	76,286	5	80,500	1	22,145	1	5,000
Obsolescent .. .. .	—	—	—	—	1	5,180	—	—	—	—
Effective .. .. .	8	127,250	3	76,286	4	75,320	1	22,145	1	5,000
Building .. .. .	—	—	1	13,800	1	8,000	1	10,000	—	—
	8	127,250	4	90,086	5	83,320	2	32,145	1	5,000

Projected—Nil. British figures include one ship (7,080 tons) not counted as part of war fleet. Exact tonnage of Japanese ship building uncertain.

(C) POST-WASHINGTON CRUISERS ARMED WITH 8" GUNS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. .. .	11	110,000	—	—	8	68,400	3	30,000	2	20,000
Building .. .. .	6	56,800	18	180,000	4	40,000	3	30,000	4	40,000
Effective .. .. .	17	166,800	18	180,000	12	108,400	6	60,000	6	60,000
Projected .. .. .	—	—	5	50,000	—	—	—	—	—	—

Of the 6 British ships "building," 2 have been ordered but not yet laid down, and work on which is suspended; 2 ships building are of 8,400 tons only. Of Japanese ships built, 3 are of 7,100 tons only. U.S.A. 10 not yet laid down.

(D) OTHER CRUISERS OF 7,000 TONS AND UP.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. .. .	6	54,556	12	90,615	7	59,997	10	96,980	4	35,146
Obsolescent .. .. .	—	—	2	20,115	7	59,997	5	49,997	2	16,564
	6	54,556	10	70,500	—	—	5	46,983	2	18,582

Building and Projected : Nil. Of the British ships, 4 (39,426 tons) have 7.5" guns; 2 French ships (25,236 tons) have 7.6" guns. All the obsolescent vessels, and the two effective Italian ships, are armoured cruisers with armaments including guns of 8" or over. The Italian ships are officially classed as Second-class Battleships.

## (E) CRUISERS UNDER 7,000 TONS WITH GUNS OF 6" OR UNDER.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	No.
Built .. ..	37	162,555	2	5,386	22	101,875	4	17,439	7	22,885
Obsolescent ..	—	—	2	5,386	1	3,120	—	—	—	—
Effective .. ..	37	162,555	—	—	21	98,755	4	17,439	7	22,885
Building .. ..	2	12,000	—	—	—	—	1	6,496	6	29,602
	39	174,555	—	—	21	98,755	5	23,935	13	51,987

Projected : Nil. The tonnage of the two British ships "Building" is uncertain. It is given as "under 7,000 tons," and is assumed at 6,000. They have been authorized, but not yet ordered.

## (F) TOTAL OF CRUISERS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. ..	54	327,111	14	96,001	37	230,272	17	144,419	13	77,531
Obsolescent ..	—	—	4	25,501	8	63,117	5	49,997	2	16,564
Effective .. ..	54	327,111	10	70,500	29	167,155	12	94,422	11	60,967
Building .. ..	8	68,800	18	180,000	4	40,000	4	36,496	10	69,602
	62	395,911	28	250,500	33	207,155	16	130,918	21	130,569
Projected .. ..	—	—	5	50,000	—	—	—	—	—	—

See Notes to Tables (D) and (E).

## (G) FLOTILLA LEADERS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. ..	16	23,350	—	—	—	—	9	19,147	20	29,280
Building .. ..	3	4,240	—	—	—	—	16	39,024	3	4,881
Effective .. ..	19	27,590	—	—	—	—	25	58,171	23	34,161

## (H) DESTROYERS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. ..	134	134,235	309	307,153	106	110,425	58	50,895	63	47,512
Obsolescent ..	—	—	24	16,032	4	3,120	7	3,757	4	1,811
Effective .. ..	134	134,235	285	291,121	102	107,305	51	47,138	59	45,701
Building .. ..	26	34,936	—	—	13	22,110	6	8,268	8	9,704
	160	169,171	285	291,121	115	129,405	57	55,406	67	55,405
Projected .. ..	—	—	12	?	—	—	—	—	—	—

Of the effective American Destroyers, 61 (63,991 tons) are listed for disposal. Of the remainder, 10 (8,810 tons) together with 15 obsolescent craft, have been assigned to Coast Guard duties; 10 (10,270 tons) are fitted as mine-layers, and two (2,054 tons) as seaplane tenders. Eleven completed Japanese destroyers and all those building are of 1,700 tons, and might be considered as Flotilla leaders.

## (J) TOTAL OF FLOTILLA LEADERS AND DESTROYERS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. ..	150	157,585	309	307,153	106	110,425	67	70,042	83	76,792
Obsolescent ..	—	—	24	16,032	4	3,120	7	3,757	4	1,811
Effective .. ..	150	157,585	285	291,121	102	107,305	60	66,285	79	74,981
Building .. ..	29	39,176	—	—	13	22,100	22	47,292	11	14,585
	179	196,761	285	291,121	115	129,405	82	113,577	90	89,566
Projected .. ..	—	—	12	?	—	—	—	—	—	—

1 Br. F.L. and 8 T.B.D. not yet ordered. 6 Fr. F.L. not yet laid down. See also Notes to (G and H).

## (K) SUBMARINES OVER 600 TONS.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. .. .	38	39,409	57	52,855	64	66,627	29	25,662	24	21,730
Obsolescent ..	—	—	—	—	—	—	6	4,367	—	—
Effective .. ..	38	39,409	57	52,855	64	66,627	23	21,295	24	21,730
Building .. ..	16	20,830	5	10,170	7	11,870	31	40,710	7	5,628
	54	60,239	62	63,025	71	78,497	54	62,005	31	27,358
Projected .. ..	—	—	1	?	—	—	—	—	—	—

## (L) SUBMARINES OF 600 TONS AND UNDER.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. .. .	15	6,125	65	29,453	—	—	23	11,196	19	5,534
Obsolescent ..	—	—	17	6,230	—	—	5	2,188	7	1,976
Effective .. ..	15	6,125	48	23,223	—	—	18	9,008	12	3,558
Building .. ..	—	—	—	—	—	—	16	9,088	7	4,193
	15	6,125	48	23,223	—	—	34	18,096	19	7,751

## (M) TOTAL OF SUBMARINES.

	British Empire.		U.S.A.		Japan.		France.		Italy.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Built .. .. .	53	45,534	122	82,308	64	66,627	52	36,858	43	27,264
Obsolescent ..	—	—	17	6,230	—	—	11	6,555	7	1,976
Effective .. ..	53	45,534	105	76,078	64	66,627	41	30,303	36	25,288
Building .. ..	16	20,830	5	10,170	7	11,870	47	49,798	14	9,821
	69	66,364	110	86,248	71	78,497	88	80,101	50	35,109
Projected .. ..	—	—	1	?	—	—	—	—	—	—

"Building" includes 6 Br. not yet ordered; 3 U.S.A. and 9 Fr. not yet laid down.

## (N) OTHER WARSHIPS.

The following classes, which have little offensive value, have been excluded from the discussions on limitation, and tonnages are, therefore, omitted.

	British Empire.			U.S.A.			Japan.			France.			Italy.		
	Blit.	Bldg.	Pro.	Blit.	Bldg.	Pro.	Blit.	Bldg.	Pro.	Blit.	Bldg.	Pro.	Blit.	Bldg.	Pro.
Cruiser Minelayers ..	1	—	—	—	—	—	3	1	1	—	1	—	—	—	—
Monitors .. .. .	3	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Torpedo Boats .. ..	—	—	—	—	—	—	—	—	—	7	—	—	40	—	—
Sloops .. .. .	31	11	—	—	—	—	—	—	—	8	4	—	22	—	—
Coastal Motor Boats	6	—	—	—	—	—	3	—	—	3	7	—	69	4	—
Gunboats and Dispatch Vessels ..	—	—	—	11	—	—	4	—	—	45	—	—	7	—	—
River Gunboats .. ..	18	1	—	10	—	—	9	1	—	11	—	—	2	—	—
Minesweepers .. ..	33	—	—	42	—	—	12	—	—	26	—	—	44	—	—

Four Italian Sloops and six Minesweepers are equipped for mine-laying.

## (5) COST OF CONSTRUCTION OF TYPICAL WARSHIPS.

Ship.	Date Completed.	Tons.	Total Cost.	Cost per Ton.
<b>Battleships :</b>			£	£
Majestic .. .. .	1895	14,900	916,382	61.52
Iron Duke .. .. .	1914	25,000	2,080,918	83.26
Rodney .. .. .	1927	35,000	7,000,000*	200.00*
<b>Large Cruisers :</b>				
Edgar .. .. .	1893	7,350	410,980	55.91
(a) Shannon .. .. .	1908	14,600	1,423,410*	90.63*
Effingham .. .. .	1925	9,770	2,138,999	218.93
<b>Light Cruisers :</b>				
Charybdis .. .. .	1895	4,360	241,029	55.28
Lowestoft .. .. .	1914	5,440	375,162	68.96
(b) Caledon .. .. .	1917	4,180	547,300	130.93

\*Estimated Cost, exclusive of Armament. (a) Armoured Cruiser. (b) No Light Cruiser of the smaller type completed since 1918.



